# Sprint 5 Increment – AI Gym Coach (LLM Integration)

## Sprint Goal:

To enhance the application's intelligence and interactivity by integrating a locally hosted Large Language Model (LLM) for answering user queries related to fitness, nutrition, and health.

## User Story:

ID: US05

As a user, I want to ask health and fitness questions and get intelligent responses.

## What Was Delivered:

* Integrated `google/gemma-2b-it` LLM, downloaded from Hugging Face.
* Ran locally using Python libraries `transformers` and `accelerate`.
* Implemented a React-based chat interface for natural language interaction.
* Created a Flask backend to handle communication between the frontend and the local LLM.
* Enabled response generation for topics including:  
   - Workout routines  
   - Nutrition advice  
   - Exercise techniques  
   - Recovery tips

## UI Preview:

The AI Assistant responds conversationally, generating structured fitness guidance.

## Tools & Technologies:

* Frontend: ReactJS
* Backend: Flask
* LLM: google/gemma-2b-it
* Libraries: transformers, accelerate

## Outcome:

The AI Gym Coach feature is now live, offering users a dynamic way to receive personalized fitness support, improving both functionality and user engagement in the app.

